



ChristmasExpo

Security for your display

Your instructor: Greg Young

Youngschristmas.com

Security Planning

- Developing a security plan
- Deciding on the level of protection required
- Identifying the equipment needed
- Estimating the costs
- Calculating how much time & effort will be involved in installing the system

What are we protecting against?

- Wandering Guests
 - Kids wanting to visit display items up close
 - The family that wants a 'Kodak Moment'
 - Teenager wanting to compete against your mini tree chases
- Theft
 - Small items – Blow molds – Baby Jesus – Inflatables (Easy)
 - Extension cords – Copper
 - Controllers (Harder)
 - Donation Box
- Vandalism
 - Sliced light or extension cords
 - Sliced inflatables
 - Hit and Runners – knock things over – reposition items

The Plan

Review your display as layers or levels

- Think from the outside – inward
 - Street – Perimeter – Display/Open Areas - House
- How accessible is your display in general?
- What is the natural ingress/egress?
 - Corner – Middle of Block – Cul de sac
- What natural boundaries do you have?
 - Fences – Hedges – Trees – Planter beds - Culvert
- What do you want to protect?
- How easy is it to grab things quickly?
- How much money & effort do you want to expend?

Layers of Security

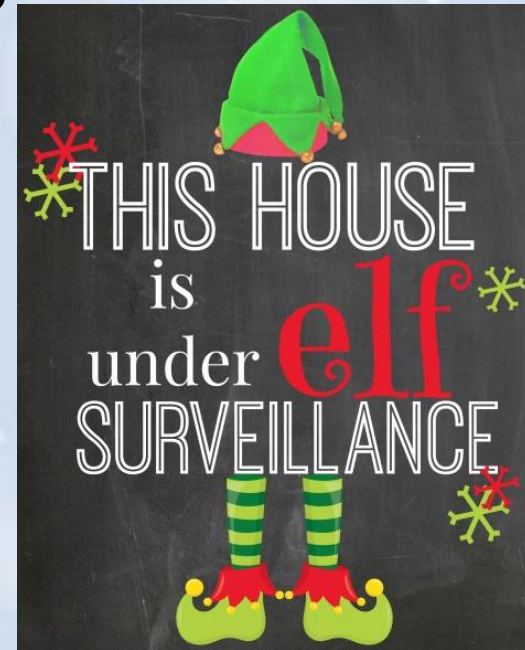
Order of Complexity & Cost

- Signs
- Lighting
- Alarms
- Locking
- Cameras/Surveillance
- Live Patrol

Security Methods

Signs

- Inexpensive
- Provide an element of doubt
- Place several around perimeter
- They can be stolen too!



Security – The Big Three



Security Methods

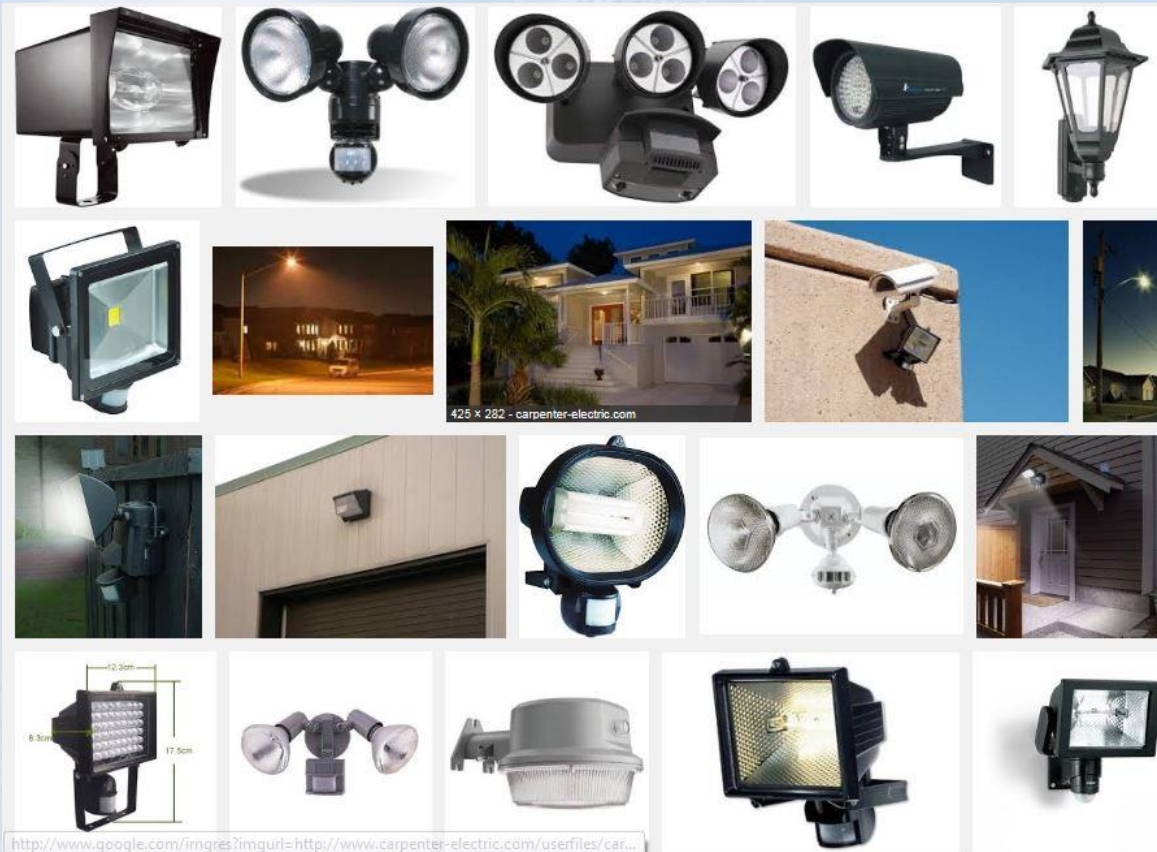
Lighting

- First solid defense
- Creates an invisible barrier - Deterrent
 - Can I be seen?
 - Am I being watched?
 - Element of surprise
- Perimeter - Open Areas – House
 - Placed any and everywhere
 - Attached to trees – fences
 - Fixed to an display element
 - Strategically staked in ground
- Two types
 - Motion Detection
 - Always On

Security Methods

Lighting

- Floods, GO BIG – GO BRIGHT



Location – Peak of the House



Location – Under an Eave



Location – on a Fence



MP. Beams Battery
Powered Motion
Sensing...



\$24.⁹⁹

Fulcrum Light-It
Wireless Motion...



\$23.⁹⁰

MP. Beams Battery
Powered Motion
Sensing...



\$31.³⁹

Dorcy LED
Wireless Motion
Sensor Flood-Lite



\$20.⁰¹

List Price: \$24.76
You Save: \$4.75

As Seen on TV
Mighty Light



\$9.⁸⁸



GE Wireless Motion Sensing LED Spotlight



(8 Customer Reviews)

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Shop at Walmart

Pickup Information

\$19.⁹⁷

Quantity
1

Add to Cart

Add to my: [Wish List](#) | [Registry](#)

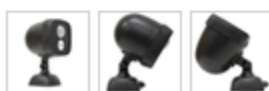
In Stock for:

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Product availability, styles, promotions and prices may vary between stores



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with shorts for the family



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Securing Items



Security Methods

Locking

- Prevents theft
- Time consuming to set up the first time
- Plethora of methods
 - Anchor to the ground
 - Fasten to fences, trees, arbors, house
 - Tether several elements together serially
- Aircraft Cable – Vinyl Coated
- Chain

Security Methods



Securing Items

Spiral Dog Tie Down Screw
Man's best friend...



Can be cut shorter....



Security Methods

Locking

- Ideas - Devices



- Another method for rebar is to drive 2 stakes in opposing directions to form an "X" and secure your item from the intersection



Eye Bolts – Blowmold



Eye Bolts – Controllers



Eye Bolts – Mega Trees



PRO SITE

More saving.
More doing.Your Store:
Gainesville Ne #1854 (Change)[Tool & Truck Rental](#)[Installation Services and Repair](#)[Gift Cards](#)[Local Ad](#)[Store Finder](#)[Credit Center](#)Shop By
Department ▾

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What can we help you find?



Project: How-To ▾

[Home](#) > [Storage & Organization](#) > [Laundry Storage](#)

| Model # 64031

5/32 in. x 100 ft. Green Vinyl Coated Wire Clothesline

★★★★★ (1) ▾ | [Write a Review](#) + | [Ask a Question](#) +**\$9.97** / each**Ship to Home** **FREE** with \$45 Or
Estimated Arrival: JUL 14 - JUL 16**Ship to Store** **FREE**
Available for Pick Up: JUL 15 - JUL 16

1

ADD TO CART

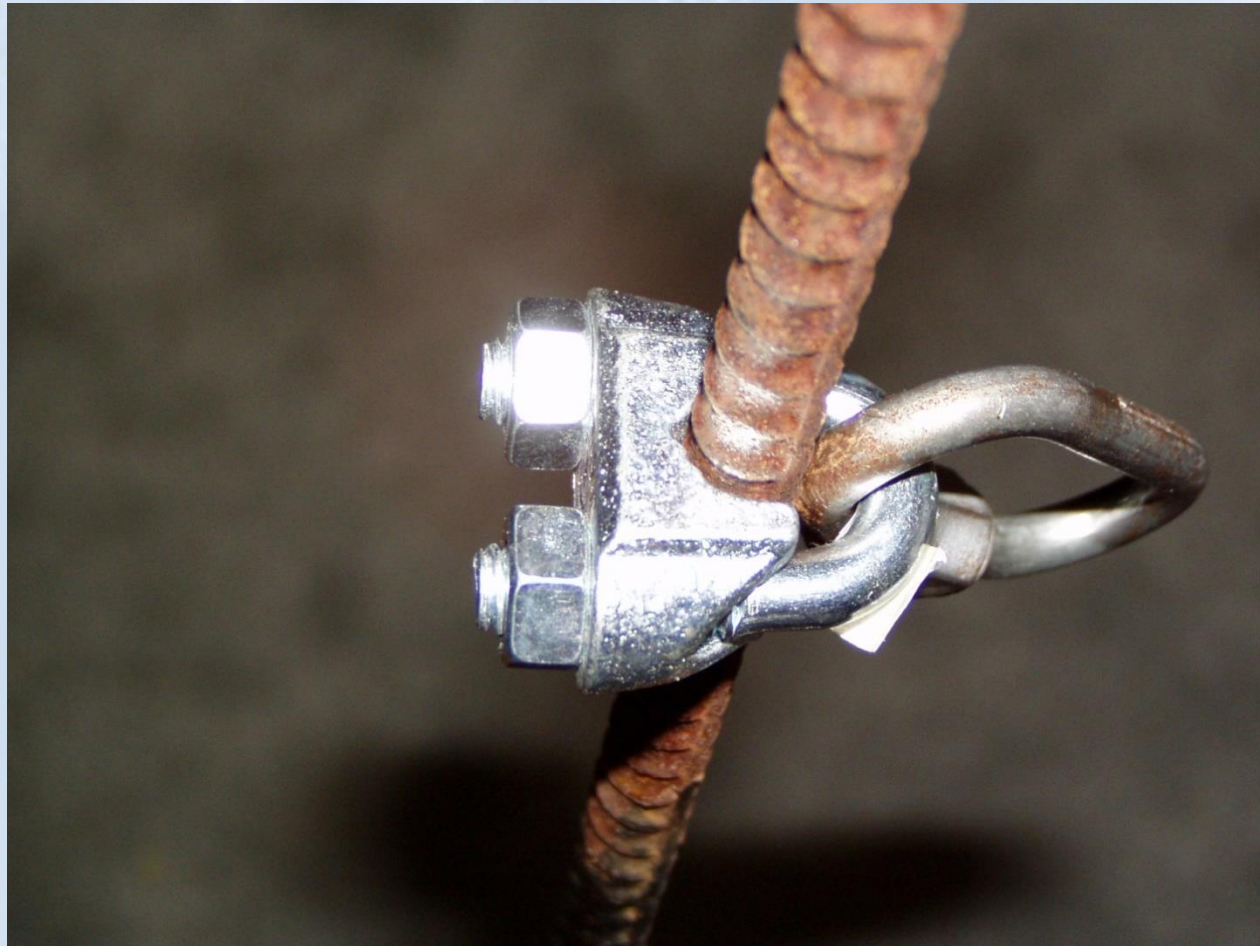
Item cannot be shipped to the following state(s):

Chain

Chain -\$.46 ft



For Very Hard Ground



Securing Items Summary

- Prevents theft
- Can lock almost anything
- Can use motion and other alarms

Security Methods

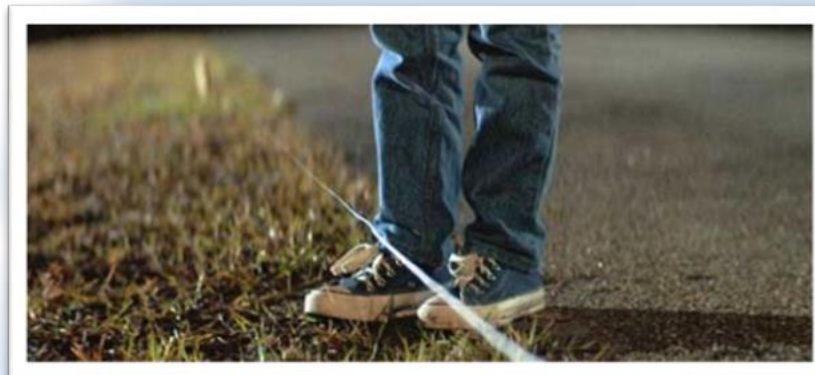
Alarms/Alerts

- Trip lines on perimeter
- Motion detection in open areas
- Trigger loops for LOR controllers
- Methods can be crafted to have external (yard) and internal (Living/bedroom) notices
 - Trigger to wireless devices for lights or alarms in you house/bedroom

Security Methods

Alarms – Trip Lines

- **Pros:**
 - Provide element of surprise
 - Can cover a wide entry point / easily redundant
 - Triggers lights, alarms, etc.
- **Cons:**
 - Someone can walk over it
 - Animals can set off false alarms
 - Always there, you have to remember that
- **Mono filament vs IR/Laser beam devices**



Security Methods

Alarms – Motion Detection

- Pros:
 - Provide element of surprise
 - Mounted/hidden many ways
 - Activate Lights or Alarms
- Cons:
 - Animals can set off false alarms
 - Can be set high enough to negate
 - Determine coverage / Overlap
- With LOR you can integrate them with controllers



Security Methods

Alarms – Trigger Loops for LOR Controllers

- LOR only uses 2 wire pairs
 - 4 & 5 Signal
 - 3 & 6 for power
- Remove the CT 5e wire from pins 1 & 2 (orange and orange & white wires) of the first controller and connect them to an input trigger. Daisy chain the controllers as usual. On the last controller connect a CT 5 plug with pins 1 & 2 connected which will complete a loop from last controller on chain to first controller on chain
- Use a LOR input connector to activate a security sequence if the loop gets broken, or hook it up to alarm of your design.



Security Methods

Cameras/Surveillance



Security Methods

Cameras/Surveillance

- An entire class can be dedicated to just this alone
- As an entry level deterrent you can use simulated cameras with red LEDs
- DVRs and/or IP cameras allow monitoring your display from anywhere in the world!

Surveillance Goals

- What is the Value of the Asset(s) to Protect?
- What is the Risk to be Mitigated?
- How will the Video Security Surveillance System be Used?
 - Observation
 - Forensic Review
 - Identification

Suggested Guidelines for Surveillance

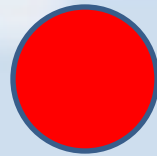
- Monitoring an Area - a Person should appear at least 5% of Screen Height.
- Detection of Intruders into an Area - Persons should be at least 10% of Screen Height.
- Recognition of a Known Individual – Persons should be 50% of Screen Height.
- Identify an Unknown Person – Present an Image at least 120% of Screen Height (head to knees).
- Standard Height for a Person that these Guidelines are Based on is 5-feet, 4-inches.

Camera resolution has NOT been taken into consideration here!



Simulated Security Cameras

- They look very real
- Very inexpensive (Amazon, eBay)
- The flashing **LED** is strong deterrent



Types of Security Cameras

- Bullet
- Dome
- Fixed/Box
- PTZ (Pan, Tilt, Zoom)
- Fisheye
- Hidden/Spy/Covert
- Thermal



Bullet Camera

- Named for its streamlined, bullet shape, this camera is best suited to a wall or ceiling mount, making it ideal for entrances such as a porch area where it works best pointed in one direction.
- It doesn't typically have capability to move direction or zoom in.
- From an intruder's perspective, it is easy to see the direction it's pointing, clueing him in on how to avoid its sight.



Infrared (Night Vision) works in Total Darkness



HD Camera – 100' night vision

74.178.55.115:...

CAMERA01



07/04/2014 09:36:03 PM

HD quality during daylight



Dome Camera

- These cameras are dome-shaped and are designed to be an “in-your-face” type of protection. Very obvious in their purpose, dome cameras are also most suited to a more protected entryway type mount so they will be immediately visible to anyone who approaches.
- “Speed domes” are a variation that spin quickly to capture a broader range of images.
- Unlike the bullet camera, it’s difficult to tell where the camera is pointed, increasing its purpose as a deterrent.



Fixed / Box Camera

- These are your traditional cameras that (usually) have detachable lenses and (usually) don't have infrared capabilities built in. They are often mounted inside of tamper-resistant housings, especially when used outdoors.
- The great thing with box cameras is that you can buy whatever quality camera you want, then choose the lens that perfectly suits your application.
- You'll typically have to buy a mount or enclosure, depending on where you want to put it, though.



PTZ Camera

- PTZ (Pan, Tilt, Zoom) cameras typically come in dome form and allow you to use software and servo motors to pan, tilt, and zoom the lens, focusing in on a target anywhere within the camera's line of sight.
- The camera can be used to cover a larger area by automatically scanning left to right or up to down, rather than just being stationary.
- PTZ functionality can be used to scrutinize an area in real-time and tracking targets until out of the line of sight.
- PTZ security cameras are very cool, but they can be quite costly, so consider their features and application carefully before committing to purchasing them for your system.



Fisheye Camera

- Fisheye cameras are becoming more popular since the IP revolution has brought much higher resolution and capability. They are thin and provide 360° coverage of an area, mount to the ceiling or wall from the base, and the software used to control them can drastically reduce the fisheye effect and get you a huge coverage area from a single camera.
- Stay away from analog fisheye cameras because it can be hard to accept the quality of lower resolution video with a fisheye effect. The IP versions can replace multiple old analog cameras nicely.



Hidden/Covert/Spy Camera

- If discretion is your primary concern, you're in luck. This is a great time to be alive, as hidden cameras are smaller and more sophisticated than ever before.
- You can find hidden cameras fashioned inside of motion sensors, alarm clocks, teddy bears, watches, eyeglasses, and even electrical outlets.
- Hidden cameras obviously don't make the best burglary deterrents (since burglars theoretically don't know that the cameras are present), but that makes them all the better for catching people in the act. **Check local laws before using!**



Thermal Camera

- Thermal cameras use thermal imaging to produce surveillance footage in dark or harsh environments. It uses heat to differentiate objects. FLIR (Forward Looking Infrared) brand is the best and most popular.
- Uses heat sensing to distinguish objects and people. Detects people and objects in smoke, haze, dust, light fog, etc. Works in complete darkness.



Lux & Low Lighting

- Lux is a unit of illumination. It's used more often than Lumens when discussing security cameras.
- Lux measures the amount of uniform light that falls on one square meter (expressed by one lumen per square meter).
- Security camera specs use Lux to indicate how much light they require to operate.
- Lower Lux levels indicates a camera as more effective in lower ambient light.
- Look for 0.2 Lux or less when choosing a low-light camera, and 2 Lux or higher for daylight cameras.

Security Camera Resolution

- Measured in vertical and horizontal line dimensions and typically limited by the capabilities of both the camera and recorder.
- Interlaced and Progressive Scan (Non-Interlaced) also effects Resolution view.
- With IP Network cameras, the “Scanning Area” refers to the number of Pixels on the Imager.



Megapixel Camera Myths & Hype

- #1 – More Pixels = Better Picture Quality
 - The TV Lines of Resolution of Camera Determines Picture Quality NOT Number of Pixels.
 - Must use Resolution Chart to Compare Cameras.
- #2 - One 3 MP Camera = Nine VGA Cameras
- #3 - Mega Pixels Perform Better in Low Light
- #4 - Mega Pixel Cameras Provides Better Color Reproduction & Visibility
- #5 – All Pixels are Created Equal
 - They vary by Manufacturer and are also Affected by: Signal to Noise Ratio, Imager Size & Type, Sensitivity, and Lens.



Security Camera Features

- Outdoor
- Vandal Resistant
- Infrared/Night Vision
- Wired & Wireless

Wired vs. Wireless



Surveillance

- Multiple cameras
- DVR Recording device
 - Inexpensive & High Quality (HD)
 - Stand alone/PC based
- Remote monitoring



IP Cameras (latest technology)

- Camera connects to your home network
- Can record to local storage or offsite
- You need some internet knowledge to configure these cameras
- High Quality





Chance to win daily prizes

NO PURCH NEC



Back to search results for "nest outdoor cameras"



Roll over image to zoom in

Nest

Nest Cam Outdoor Security Camera

★★★★☆ 2,411 customer reviews | 568 answered questions

#1 Best Seller in Surveillance & Security Cameras

Price: \$166.65 & FREE Shipping. Details

prime | Try Fast, Free Shipping

In Stock.

Want it Thursday, July 6? Order within 27 hrs 35 mins and choose One-Day Shipping at checkout. Details

Ships from and sold by Amazon.com.

Style: 1 pack outdoor camera

1 Indoor Camera and 2
Outdoor Cameras
\$512.96

1 pack outdoor camera
\$166.65

2 pack outdoor camera
\$342.99

Color: White

Amazon Certified



Control this product with your voice through select
Alexa devices

- 24/7 live video: 130° wide-angle view and all-glass lens let you look after home in crisp 1080p HD, day and night.
- Alerts and snapshots: When Nest Cam Outdoor detects activity, it can send a phone alert or email with a photo of the event.
- Rain or shine: Weatherproof camera, cable and adapter, so you can leave it out in the rain.
- Talk & Listen: Nest Cam has a built-in speaker and microphone, and lets you talk and listen through the app. So you can tell someone you're paying attention or ask the mailman to leave the package at the door.
- Simple DIY installation: Just plug it into an outdoor outlet, mount the camera and go. You can even stick it to a magnetic surface — no drilling necessary.
- Comes with a free Nest Aware trial: Get intelligent alerts and continuous cloud recording. Create Activity Zones for more precise alerts. Make and share custom clips or timelapses. And more.

Compare with similar items

Used & new (16) from \$154.88 + \$5.99 shipping

Report incorrect product information.

This item's packaging will indicate what is inside and cannot be hidden.

Share

Qty: 1

- ☐ Include 4-Year Protection for \$19.98
- ☐ Include 3-Year Protection for \$16.43

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Turn on 1-Click ordering for this browser

Ship to:

Gregory Young - 14080

Add to List

Other Sellers on Amazon

\$160.00
+ \$4.95 shipping
Sold by: tekspre

\$171.79
+ Free Shipping
Sold by: WorldWide Distributors

\$193.99
& FREE Shipping on
eligible orders. Details
Sold by: USA Supply Source

Used & new (16) from \$154.88 + \$5.99
shipping

save up to \$29
found by you a few seconds ago



Greg Young - Expo 2017

DVRs

- Inexpensive & High Quality (HD)
- Allow for remote monitoring
- Stand alone or PC based



Security Camera Summary

- They are a deterrent
- They allow positive ID of perpetrators
- They are of high quality & relatively low price
- They allow remote monitoring via the internet
- There are simulated cameras with blinking LEDs

Security Methods

Finally, there is the live patrol:

- Family or neighbors take shifts
- Volunteers can assist
 - Charity, Community Service hours
- Check local Police/Sheriff/Police Scouts for potential volunteer, or paid service
- See if you can rent an off duty squad car

Conclusion

- You can only prepare so much
- If someone wants to be malicious, no deterrent will stop them
- Maintain a good working relationship with your neighbors & local authorities
- Have your Police or Sheriff on speed dial
- If something happens MAKE IT KNOWN as widely as possible via schools, news, authorities, etc.
- If culprits are discovered follow through with prosecution and make it known
 - \$1K in damages = Felony

Any Questions?





Christmas**Expo**

Additional information can be found at:
Youngschristmas.com

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